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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,671	10/16/2003	Monica M. Marugan	GEPL.P-077	2670
21121	7590	10/18/2005	EXAMINER	
OPPEDAHL AND LARSON LLP P O BOX 5068 DILLON, CO 80435-5068				ZIMMER, MARC S
ART UNIT		PAPER NUMBER		
		1712		

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/605,671	MARUGAN ET AL.
	<b>Examiner</b> Marc S. Zimmer	<b>Art Unit</b> 1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 August 2005.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 48-61 is/are allowed.
- 6) Claim(s) 1-7,12-17,20-22,29-36 and 39-41 is/are rejected.
- 7) Claim(s) 8-11,18,19,23-28,37,38 and 42-47 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/24/05</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 12-17, 20-22, 29-36, 39-41, are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al., U.S. Patent # 5,451,632.

The Examiner has reconsidered the patentability of the claims in view of Applicant's arguments and the teachings of the reference and concluded that, in fact, the most reasonable rejection of these claims is one that is made under 35 U.S.C. 103. Okumura, it is acknowledged, does not expressly disclose blends of polycarbonate, polycarbonate-polysiloxane copolymer, and titanium dioxide, and in the amounts specified by the claims. Indeed, the Examiner's basis for rejecting the aforementioned claims relies on (i) Okumura's cursory mention in column 15, lines 40-44 that mixtures of polysiloxane-polycarbonate and the various embodiments of (B), which include polycarbonate homopolymer and titanium dioxide pigment, may also be formed, and (ii) the reasonable assumption that, in those cases where all three of polycarbonate, polycarbonate-polysiloxane copolymer, and titanium dioxide are combined, it is desirable to use the same amounts of copolymer and titanium dioxide that are prescribed by the claims. Very little "picking and choosing" is required to arrive at Applicant's invention insofar as there are a limited number of embodiments of component B (polycarbonate homopolymer, filler, fluororesin, pigments of which

titanium dioxide is exemplary, styrene resin) and the amounts of copolymer and titanium dioxide recommended by the reference overlap with the ranges set forth by Applicant.

Applicant challenges the second of these points in their reply by stating the following:

“The Examiner also now argues that the limitation of 3% siloxane as a whole is actually met, because he argues (without explanation or support) that art would understand that this value was maintained for the composition as a whole no matter what additional materials are added, even though the percentage is only provided for the two component mixture. Applicants respectfully submit that this disclosure of the reference does not support this contention.”

Applicant then proceeds to conveniently select Examples taught by the reference that support their contention that the minimum siloxane content disclosed in claim 1 is not contemplated. However, in doing so, they ignore the broader teaching in column 10, lines 40-49 where it is stated that the siloxane content as a fraction of the total weight is 0.01 to 10 wt.%. Further, the Examiner’s assertion that the skilled artisan would be motivated to keep siloxane content consistent with the amounts advocated by this passage if a formulation that also contained titanium dioxide were prepared is supported by the teachings of the disclosure. Column 10, lines 49-56 state that mechanical properties and flame resistance are compromised when one deviates from this quantity as a percentage of the composition, which, of course, *may contain other materials including titanium dioxide*.

As to the matter of whether the titanium dioxide materials are actually coated by the dispersing agent mentioned in column 12, lines 57-59, Applicant disputes the Examiner’s position that the dispersant is necessarily coated onto the pigment particles:

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"Furthermore, whether the Examiner's argument has merit with respect to the composition claims or not, what is specified is that the TiO<sub>2</sub> must have an organic coating. The Examiner has not shown how this element of the claims is met. He makes an unsupported statement that for the oil to act as a dispersant it must somehow be coated onto the pigment particles. Applicants challenge the Examiner to provide a scientific basis for this statement consistent with the requirements of *In re Albrecht*, or to withdraw the argument."

Applicant is encouraged to review the attached definition of a dispersing agent taken from *Hawley's Condensed Chemical Dictionary, 14<sup>th</sup> Edition*. According to *Hawley's*, a dispersing agent is a **surface-active** suspending medium. That is to say, they act by modifying the surface of a filler particle, in this case a pigment, thereby making its surface more compatible with the host polymer matrix into which the filler is mixed. This is a well-known phenomenon and needs no further explanation.

Finally, Applicant's arguments against the Examiner's rejection rely heavily on the absence of a preferred embodiment that resembled the claimed composition/product. They are advised however that, "disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments." *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). The broader disclosure suggests that

(a) mixtures of polycarbonate-polysiloxane and the different incarnations of (B) may be blended together. Again, polycarbonate homopolymer and titanium dioxide pigment are

among a limited number of embodiments of (B) and so the scope of the reference is not so broad as to require picking and choosing from innumerable possibilities to arrive at the instant invention.

(b) the quantities of polycarbonate homopolymer, siloxane content contributed by the copolymer, and TiO<sub>2</sub> overlap the ranges associated with these materials in the claims.

The only issue left to consider is that of secondary considerations and, in particular, whether or not Applicant has illustrated an unexpected result or a synergy that would render the 103 rejection moot.

Applicant contends that their Examples have the effect of demonstrating an unexpected result but the details surrounding the Examples are lacking that muddy the picture for the Examiner. First, Table 2 is purported to summarize the experiments of Example 1 where polycarbonate-polysiloxane copolymer is said to make up 12 percent by weight of the compositions outlined therein. However, the text of Example 1 makes no mention of the copolymer and, just as important, its constitution. Without this information, it is impossible to know precisely how much siloxane content there was in these compositions (if there was any at all) hence these Examples have little if any probative value as a comparison. Also, some of the trends emphasized by the Applicants are not fully consistent. For instance, although entry 2 has more titanium oxide than does entry 1 with all other parameters being approximately equal, its p(FTP) VO rating is considerably higher. Additionally, entries 1 and 14 and 2 and 15 appear to have essentially the same makeup yet their p(FTP) VO ratings are different. Is this

attributable to the presence of AO 1076 in entries 13 and 14? If so, there is no description of this material and how it impacts the results.

*In arguendo*, even had the Applicant properly demonstrated an unexpected result, this would still not serve to overcome the Examiner's rejection as the lower limit is easily taught with sufficient specificity so as to merit an anticipation of this aspect of the instant invention. The reference discloses a siloxane content of 0.01 to 10 weight percent, the claims 3 wt.% or higher. There is overlap over 70% of the range taught by the reference including at 3 wt.%. Applicant cannot rely on unexpected results where the aspect that is purported to be unexpected, i.e. that the siloxane content must be 3 wt.% or better, is anticipated.

#### ***Allowable Subject Matter***

Claims 8-11, 18-19, 23-28, 37-38, and 42-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 48-61 are considered allowable in view of Applicant's arguments. In the reference, the pigment is treated with the dispersing agent *in situ* whereas the claim language of the method claims connotes using titanium dioxide that has been coated prior to adding it to the other materials.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 5, 2005

Marc Zimmer  
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AV 1712